REMARKS

Claims 13-14, 16, 18-19, 21-22, 24-27, 29, 31-32, 34-35 and 37-41, as amended, and new claims 42-43 appear in this application for the Examiner's review and consideration. Claims 13 and 26, the only independent claims, have been amended to recite that the single centralized game server hosts a single instance of a dynamic, multi-user, network based game, that all of the audio conferences are contained within this single network based game instance, that each audio conference comprises a group containing a plurality of participant identifications having a shared game context within the game state profiles comprising parameters or attributes that permit audio communication among the game participants associated with those participant identifications and audio paths between a plurality of geographically distributed audio mixers and communication devices associated with each game participant identification in that group and that the game server switches participants among the audio conferences seamlessly and dynamically during the single network based game instance and non-disruptively to the single network based game instance and any of the audio conferences. Claims 21 and 34 have been amended to recite that each audio conference comprises a session initiation protocol based audio conference and that the step of using the game server to switch participants among the audio conferences further comprises using session initiation protocol signaling messages to switch participants among the audio conferences.

New claims 42 and 43 have been added depending from claim 21 and reciting that a signal description protocol is obtained at the game server from each game participant identification using session initiation protocol signaling messages and a signal description protocol is obtained at the game server for the conference server and each audio mixer using session initiation protocol signaling messages. In addition, audio path information for each game participant identification is obtained from its signal description protocol and is communicated to the conference server and each audio mixer, and audio path information is obtained for the conference server and each audio mixer from its signal description protocol and is communicated to the game participant identifications. The communicated audio path information is used to establish the audio paths between the plurality of geographically distributed audio mixers and communication devices associated with each game participant identification in each group.

Support for these amendments can be found in the specification and claims as originally filed, for example, in the specification on page 6, lines 15-26, page 10, lines 1-12 and 25-28 and at Fig. 5. As these amendments do not introduce any new matter into the present application, their entry at this time is warranted. Applicants request reconsideration and withdraw of all pending rejections based on the present amendments and the following remarks.

Claims 13 and 26 and all those claims depending therefrom, were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. It was asserted that the subject matter was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, has possession of the claimed invention. Claims 13 and 26 recite that each audio mixer is separate from the game participants, game server, and conference server. The specification discloses various embodiments and arrangements of the servers for use in accordance with the present invention, and the claimed invention recites one of those embodiments. Clearly, Applicants appreciated the importance of every disclosed and enabled embodiment in the specification, and Applicants can elect any disclosed embodiment for inclusion in the claimed invention. Therefore, Applicants assert that this rejection is misplaced and respectfully request that the rejection be reconsidered and withdrawn.

Claims 40 and 41 were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. It was asserted that the subject matter was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, has possession of the claimed invention. In particular, it was asserted that Applicants did not appreciate the importance of the claimed attribute, i.e., separate physical proximity in the game environment, prior to receiving a rejection. These claims were added to further define the claimed invention over the cited prior art and Examiner's rejections. It is common practice to include amended claims and new claims in response to the cited art and to the position of the Examiner based on this cited art. The recitations of these claims are fully supported and enabled by the specification as filed and provide additional recitations that further define the claimed invention over the cited art. The Examiner's assertions in this rejection are without merit, and Applicants respectfully request that

this rejection be withdrawn.

Claims 13 and 26 and all claims depending therefrom were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It was asserted that the Examiner cannot determine if the Applicants are attempting to claim the people playing the game or the computers associated with each game participant. Claims 13 and 26 have been amended to recite that each audio mixer is separate from the communication devices associated with the game participants. Applicants assert, therefore, that this amendment clarifies Examiner's confusion and respectfully request that the rejection be reconsidered and withdrawn.

Claims 26, 27, 29, 31, 32, 34, 35, 37 and 38 were rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. All of these claims have been amended to recite a non-transitory computer readable medium. Therefore, Applicants assert that this rejection has been overcome and respectfully request that the rejection be reconsidered and withdrawn.

All pending claims were rejected under 35 U.S.C.§ 103(a) as being unpatentable over U.S. Patent No. 7,006,616 to Christofferson et al. ("Christofferson"). It was asserted that Christofferson renders all of the recitations of the claimed invention obvious. Applicants request reconsideration and withdraw of these rejections for the following reasons.

Christofferson is directed to a teleconferencing bridge with edgepoint mixing that provides a separate mixing function for each participant in a conference for a high degree of end-user control in a conference. An audio mixer is provided for each participant, and based at least in part on the control streams, the audio bridge returns a separately mixed audio signal to each participant. The interface uses a packet-switched network such as an IP network. The visual interface includes a software program running on a PC such as an interactive gaming program. The participant's location with the virtual environment and the direction the participant is facing can be used in mixing the audio signal. Each participant is in direct communication with the audio-conference bridging system including the system control unit, which establishes the parameters of the conference and the audio bridging unit that includes the edgepoint mixers for providing the audio signals, *see* Figs. 2, 4 and 5. Although the audio-conference bridging system

is discussed as being used in conjunction with an interactive gaming application (col. 20, line 56 – col. 21, line 3), there is no disclosure or discussion regarding the components of the interactive gaming system or how the audio-conference bridging system works in conjunction with the interactive gaming application.

The claimed invention has been amended to clarify that a single centralized game server is used and that the game that is hosted by the game server has integrated voice over internet protocol communication capabilities. The claims now recite a plurality of geographically distributed audio mixers and reinforce that the various components, participants, game server, conference server and audio mixers are separate and distinct components. The claims also state that the plurality of participants in a given group are identified based solely on the maintained game state, that solely the game server send instructions to the conference server and that the conference server establishes the audio conferences solely in response to instructions sent from the game server. Therefore, the present amendments reinforce the type of gaming system with integrated audio conferences that is a part of the claimed invention. These elements are not disclosed or rendered obvious by Christofferson.

In addition, the claimed invention has been amended to clarify that a single instance of a network-based game is established. The claimed invention includes a plurality of separate and independent audio conferences that are all part of or contained within this single game instance. Each audio conference contains a group of game participants and audio paths between the game participants, i.e., the communication devices associated with the game participants, and the audio mixers. The claimed invention provides for switching among the various audio conferences within the game instance dynamically, i.e., during the game, seamlessly, during the flow of the game without requiring, for example, additional input from the game participants, and non-disruptively, i.e., without disrupting the game experience or any of the audio conferences. These features are not disclosed or taught by Christofferson.

In general, the disclosure of Christofferson deals with a multiple participants in a single audio conference. Christofferson does not disclose or address the issue of multiple simultaneous and independent audio conferences within a single game. Christofferson only uses a single audio conference and deals with the changes of audio provided to each participant within the single

audio conference through the use of audio mixing using an audio mixer associated with each participant in the single audio conference. Therefore, one skilled in the art given the disclosure of Christofferson, would not be provided with any teaching or suggestion related to the issues involved in using multiple simultaneous audio conferences involving different groups of participants within a single network-based game instance as in the claimed invention.

In addition, one skilled in the art would only be taught that the provision of different audio outputs to the various participants in the single audio conference of Christofferson is accomplished using independent audio mixing for each participant. As a participant moves within the displayed environment of Christofferson, as provided in the example of Fig. 8, that participant never leaves the same audio conference, and all changes to the audio provided within that single audio conference are created through audio mixing. Moving away from a given person or whispering to one person in the displayed environment of Christofferson does not initiated a new audio conference or initiate a transfer of a given participant to a new audio conference but merely requires the modification of the audio mixing provided to a given participant to simulate the movement or actions desired. The multiple conferences of the claimed invention, however, have different groups of participants, and each audio conference has its own audio paths between the participants and the audio mixers. Therefore, in the claimed invention, these are separate, distinct and independent audio conferences and not simply modifications of a single audio conference. These elements are not disclosed or taught by Christofferson.

Christofferson does provide a brief disclosure of moving a given participant from an existing audio conference to a new audio conference, i.e., chat room. However, this requires the participant to select moving to the new chat room, i.e., a new conference. This chat room, however, is not part of the same single network-based game instance as in the claimed invention. In addition, there is no disclosure in Christofferson that this change is handled dynamically, seamlessly and non-disruptively to the game and audio conferences as in the claimed invention. Clearly, the move to a new chat room that is not part of the same chat and the establishment of a new SID for the new chat room is not a seamless and non-disruptive move. There will be disruption to the flow of audio communication for the moving party and a definite, i.e., not seamless, change to the audio conference associated with the new chat room.

The use of session initiation protocol (SIP) and the signaling messages that SIP uses to create, modify and conduct communication sessions facilitates this seamless and non-disruptive transition of game participants among the multiple concurrent audio conferences of the claimed invention. In particular, the signal description protocols (SDPs) for the participant communication devices, conference server and audio mixers are communicated to the game server with the SIP signaling messages, and the necessary information for creating the audio paths between the communication devices and the audio mixers are derived from the communicated signal description protocols. Including the necessary routing and path information with the signaling messages eliminates the need for obtaining the routing information in separate communications and facilitates the seamless and non-disruptive nature of the audio conference transfer. There is no teaching or suggestion in Christofferson regarding the use of SIP or of the communication of audio path information with SIP messages. Therefore, one skilled in the relevant art given the disclosure of Christofferson would not be provided with the motivation or suggestion to use SIP based signaling messages to communicate the required audio path information for creation and switching of audio communications as in the claimed invention.

As was discussed in previous amendments, there is no disclosure in Christofferson of a game server and a separate conference server. In the present invention, the communication devices associated with the participants only communicate to the game server and receive audio from the audio mixer and do not send instructions directly to the conference server. As is illustrated in Figs. 2, 4 and 5 of Christofferson, participants or participant stations communicate directly with the conference servers, i.e., the audio-conference bridging system and the system control unit. In the claimed invention the conference server, in accordance with the game server instructions, creates an audio path between an audio mixer and the game participant communication devices. These are the audio paths that are used for the audio communications among participants. Therefore, the claimed invention is directed to a system that uses a game server that is separate from the conference server to control the audio conferences based upon the game state profiles of the game participants. Christofferson does not disclose a game server. Moreover, in Christofferson the audio conferences are initiated by the conference server in conjunction with requests and actions communicated directly from the participants. In the present

invention, the participants do not send instructions to the conference server and are only in communication with the game server and the audio mixer. The game server solely initiates and controls the audio conferences as an integrated part of the gaming experience.

Although the audio-conference bridging system is discussed as being used in conjunction with an interactive gaming application (col. 20, line 56 –col. 21, line 3), there is no disclosure or discussion regarding the components of the interactive gaming system or how the audio-conference bridging system works in conjunction with the interactive gaming application.

As asserted in the outstanding Office Action, the system control unit 200 of Christofferson is the game server of the claimed invention, and the audio bridging unit 300 of Christofferson is the conference server. The claimed invention recites a plurality of geographically distributed audio mixers that are separate from the conference server, game server and game participants. As illustrated in Fig. 1 of Christofferson, the edge point mixers 310 are contained within the audio bridging unit 300 and are clearly not separate. In Christofferson, "each EdgePoint mixer 310 is a software process running on, or implemented as part of, the audio bridgeing unit 300." (col. 5~ lines 45-47) In addition, Fig. 1 does not illustrate geographically distributed edge point mixers.

One skilled in the art given the disclosure of Christofferson would not be taught to modify the system of Christofferson to remove the EdgePoint mixers from the bridging unit and to use geographically distributed audio mixers as in the claimed invention. At best, Christofferson can be shown to suggest placing the EdgePoint mixers at the participant stations. However, such EdgePoint mixers would not be separate from the game participants as in the claimed invention. Moreover, Christofferson expressly teaches away from this type of distributed arrangement due to the undesirable system demands of such an arrangement. According to Christofferson, placing the EdgePoint mixers at the participants "would require, however, that all participant stations 110 broadcast their audio signal inputs 325 to those distributed EdgePoint mixers 310, which is likely to be inefficient without extremely high-speed connections among all participant stations 110. The advantage to having centralized EdgePoint mixers 310 is that each participant station 110 need only transmit and receive a single audio signal." (col. 8, lines 61-67)

Christofferson also fails to disclose an audio conference server that is configured to

establish each audio conference solely in response to instructions from the game server. This element of the claimed invention provides for a system in which each participant only has to interface with and communicate with the single centralized gaming server that provides the desired network based gaming environment. This single centralized gaming server can maintain the game state of each participant and can initiate and control voice over internet protocol based audio conferences containing the game participants based on the generated and maintained game state profiles. The participants do not have to interface with or communicate with a separate audio conference server to provide the desired audio conference. All the necessary initiation and control is provided solely by the game server.

Christofferson does not disclose a suitable single centralized game server and a separate conference server that hosts the desired audio sessions containing the participants based solely on instructions from this single centralized game server. Christofferson clearly contemplates and teaches communication between participants and the audio bridging unit for the purpose of exchanging information needed by the audio bridging unit to host an audio session. The devices used by the participants in Christofferson include "device(s) that can, alone or in combination. communicate effectively with both the system control unit 200 and the audio bridging unit 300 ... " (col. 7, lines 24-27) In Christofferson, the "audio bridging unit 300 includes the EdgePoint mixers 310 and is generally responsible for receiving incoming audio signals 325 from, and outputting separately mixed signals 330 to, the participant stations 110." (col. 8, lines 19-22) In Christofferson, "each of the participant stations 110 establishes an audio connection with the audio bridging unit 300 and communicates the appropriate SID." (col. 11 lines 43-46) The SID is a session identifier that is used in establishing an audio session to correlate incoming audio signals and to apply the appropriate mixing parameters. According to Christofferson in column 5, lines 3-13:

> EdgePoint mixing is much more flexible. Each participant 20 transmits his/her media stream 60 to the conference bridge 50. The conference bridge 50, however, includes a separate EdgePoint mixer 70 for each participant 20. In addition, each participant transmits a control stream 80 to the audio bridge 50. Based at least in part on the control streams 80, the audio bridge 50 returns a separately mixed audio signal to each participant 20. Because each participant's control stream 80 is likely to be distinct, each participant 20 is able to enjoy a distinct and fully tailored conference experience.

Therefore, Christofferson fails to disclose or teach all of the elements of the claimed invention as currently recited in claims 13 and 16. All of the other claims depend either directly or indirectly from claim 1 and are patentable over Christofferson as least for the same reasons given above with regard to claims 13 and 26. In addition, the dependent claims contain additional recitations that further define the claimed invention over Christofferson.

Claims 39 and 41 depend from claim 13 and include recitations not found in Christofferson. Claim 13 recites that the game comprises a sports themed game. Claim 40 recites that at least one participant identification is simultaneously contained in at least two identified groups of participant identifications and the associated game participant participates simultaneously in at least two of the independent audio conferences based on single shared contexts within the game state profile that comprises attributes separate from physical proximity among game participants within the game environment. Similarly, claim 41 recites that the shared game context comprises attributes separate from physical proximity among game participants within the game environment.

There is no such teaching in Christofferson. In Fig. 8 of Christofferson, all of the participants shown in the display are part of the same audio conference. Entry into another audio conference involves selecting a link to another location, e.g., Hawaii. This will terminate participation in the audio conference associated with the current location. Moreover, all of these conferences in Christofferson are location or physical proximity based. Christofferson does not teach simultaneous participation in multiple independent audio conferences based on attributes in the game state profiles that are separate from physical proximity as currently recited in the new claims. Christofferson mentions muting, for example, inappropriate language at the request of one of the participants located in the physical region of the audio conference. However, this is an audio muting or audio mixing function and is not the establishment of a separate and independent audio conference.

Applicants assert that all claims are now in condition for allowance, early notification of which is respectfully requested. As the total number of claims as amended is less than the number of claims as originally filed, no fees are believed due for the submission of this amendment. No other fees are believed due.

Respectfully submitted,

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